

ABSTRACT OF THE DISCLOSURE

The present invention generally relates to methods of inhibiting ethylene responses in plants and plant materials, and particularly relates to methods of inhibiting various ethylene responses including plant maturation and degradation, by exposing plants to cyclopropene derivatives and compositions thereof wherein: 1) at least one substituent on the cyclopropene ring contains a carbocyclic or heterocyclic ring, or 2) a substituent contains silicon, sulfur, phosphorous, or boron, or 3) least one substituent contains from one to four non-hydrogen atoms and at least one substituent contains more than four non-hydrogen atoms.